ABSTRACT

In accordance with the present invention, a receiver circuit and a method of controlling voltage pulses, thereby improving the performance of the receiver are provided. The receiver circuit includes a switch for blocking high voltages and for converting voltage signals to current signals. The switch includes first and second signal terminals and a control terminal. The switch exhibits an ON resistance when closed, wherein the ON resistance is controlled by an electric value at the control terminal. The receiver circuit also includes a control circuit coupled to the switch for controlling the ON resistance of the switch in closed mode. The first switch signal terminal is coupled to an output of a transducer and the second switch signal terminal is coupled to an input of a low-noise amplifier circuit. The switch is a transmit/receive switch which is open during a transmission time interval and closed during a reception time interval. The switch passes only low-voltage pulses to the low-noise amplifier circuit which requires an input resistance and a feedback resistance. The ON resistance of the switch is the input resistance of the low-noise amplifier circuit. The control circuit is a servo-loop circuit for generating an electric value at the control terminal of the switch when closed.